

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: August 28, 2002, 17:06:53 ; Search time 75.04 Seconds

(without alignments)
333.044 Million cell updates/sec

Title: US-09-502-984B-1

Perfect score: 1194

Sequence: 1 APPPNLPDPKFEKALIAA.....GGFWSAMSEPVSLTPSDLD 225

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

1: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1980.DAT:*
2: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1981.DAT:*
3: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1982.DAT:*
4: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1983.DAT:*
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6: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1985.DAT:*
7: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1986.DAT:*
8: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1987.DAT:*
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10: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1989.DAT:*
11: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1990.DAT:*
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19: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1998.DAT:*
20: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA1999.DAT:*
21: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA2000.DAT:*
22: /SIDSL/gcgdata/hold-geneseq/geneseqp-emb1/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Length	DB ID	Description
1	1194	100.0	225 21 AAB21685	Human mature eryth
2	1194	100.0	438 21 AAY44622	Truncated human Ep
3	1194	100.0	488 18 AAW08349	Eporec fusion prot
4	1194	100.0	503 21 AAB13012	Q-tagged erythro
5	1194	100.0	508 11 AAR05512	EPO receptor. Hom
6	1194	100.0	508 16 AAR70032	Human erythropoiet
7	1194	100.0	508 15 AAR65033	Human erythropoiet
8	1187	99.4	508 15 AAR47518	Human erythropoiet
9	1186	99.3	438 21 AAY44623	Human EPO receptor
10	1112	93.1	211 21 AAB21686	R154C truncated hu
11	982.5	82.3	507 11 AAR06511	Human mature eryth
				EPO receptor seque

12	982.5	82.3	507 15 AAR47517	MEL EPO receptor.
13	982.5	82.3	507 16 AAR69502	Mouse erythropoiet
14	975.5	81.7	507 15 AAR50327	Mouse soluble EPO
15	966.5	80.9	265 15 AAR50326	Mouse soluble EPO
16	222.5	18.6	117 21 AAY94338	Human cell surface
17	205	17.2	625 22 AAU00377	Mouse thrombopoiet
18	201	16.8	632 16 AAR75941	Soluble murine MPL
19	200	16.8	633 16 AAR79908	Type I MPL recepto
20	200	16.8	633 16 AAR79053	Mouse type I MPL r
21	200	16.8	633 17 AAR98948	Mouse type I MPL r
22	200	16.8	633 17 AAW03513	Mouse type I MPL r
23	200	16.8	633 21 AAY52166	Mouse type I MPL r
24	198	16.6	626 16 AAR75939	Murine myeloprolif
25	185	15.5	635 13 AAR23970	MPL env protein w
26	185	15.5	635 16 AAR75940	Human myeloprolife
27	185	15.5	635 22 AAU00376	Human thrombopoiet
28	169	14.2	30 17 AAR89963	Synthetic human er
29	160.5	13.4	303 20 AAW70845	Human zcytor5 Vari
30	160.5	13.4	350 19 AAW55015	Amino acid sequenc
31	160.5	13.4	350 22 AAE00824	Human NR6 haemopo
32	160.5	13.4	389 20 AAW70846	Human zcytor5 Vari
33	160.5	13.4	389 20 AAW70848	Human zcytor5 Vari
34	160.5	13.4	389 20 AAW70849	Human zcytor5 Vari
35	160.5	13.4	389 20 AAW70844	Human zcytor5 Vari
36	160.5	13.4	392 20 AAW70840	Human zcytor5 Vari
37	160.5	13.4	408 19 AAW59805	Amino acid sequenc
38	160.5	13.4	408 20 AAY26338	Human U4 haematopo
39	160.5	13.4	410 20 AAY29779	Human DNAX soluble
40	160.5	13.4	410 21 AAB19588	Human cytokine-11k
41	160.5	13.4	410 22 AAB36647	Human cytokine rec
42	160.5	13.4	421 22 AAE00826	Murine haemopoiet
43	160.5	13.4	422 20 AAY26339	Human U4 haematopo
44	160.5	13.4	422 20 AAY06479	Human tumour-assoc
45	160.5	13.4	422 20 AAY17825	Human PRO327 prote

ALIGNMENTS

RESULT 1	
AAB21685	
ID AAB21685 standard; peptide: 225 AA.	
AC AAB21685;	
DT 21-DEC-2000 (first entry)	
XX	
DE Human mature erythropoietin receptor EPOR extracellular domain #1.	
XX	
KW Ligand: cell surface receptor: erythropoietin; EPOR; human.	
OS Homo sapiens.	
PN WO200047612-A2.	
PD 17-AUG-2000.	
XX	
PF 11-FEB-2000; 2000WO-US03665.	
XX	
PR 11-FEB-1999; 99US-0120009.	
PR 29-APR-1999; 99US-0131674.	
XX	
PA (XENC-) XENCOR INC.	
XX	
PI Luo P, Dahiyat B;	
XX	
DR WPI; 2000-549135/50.	
XX	
PT Screening for ligand analogs and agents which modulate ligand-receptor	
PT binding, comprises adding a test ligand to a non-naturally occurring	
PT cell surface receptor analog -	
XX	
PS Example 1; Fig 8; 82pp; English.	

XX Recombinant immunogen corresp. to dimeric form of a receptor - used
 PT for generating antibodies able to act as receptor agonists, esp. of
 PT erythropoietin receptor for treating anaemia
 XX
 PS Example 1; Page 39-41; 83pp; English.
 XX
 CC A fusion protein (AAM08349) encoded by plasmid mta1sEporFC (AAT48800)
 CC comprises the human erythropoietin receptor (Epor) extracellular
 CC domain fused (via a Factor Xa cleavage sequence) to the FC portion
 CC of human IgG1. It can be expressed e.g. in transfected Drosophila
 CC S2 cells upon induction with copper sulphate. The cells secrete
 CC EporFC as a dimeric molecule due to the affinity of the FC moiety
 CC for itself. The dimeric receptor can be used as an immunogen to
 CC generate antibodies (monoclonal, polyclonal, chimeric, humanised)
 CC able to act as Ecor agonists for use in treatment of anaemia.
 CC
 SQ Sequence 488 AA;

Query Match 100.0%; Score 1194; DB 18; Length 488;
 Best Local Similarity 100.0%; Pred. No. 3.8e-112;
 Matches 225; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 APPNLPDPKFEKSKAALLAARGPEELCTFERLEDVLCWEBAASAGVPGNYSFYQLE 60
 DB 25 APPNLPDPKFEKSKAALLAARGPEELCTFERLEDVLCWEBAASAGVPGNYSFYQLE 84
 QY 61 DEPMKLCRLHOAPRTARGAVFMCSLPTADTSSFPLELRVTASGAPRHRVHINEVVL 120
 DB 85 DEPMKLCRLHOAPRTARGAVFMCSLPTADTSSFPLELRVTASGAPRHRVHINEVVL 144
 QY 121 LDAPVGLVARLADSESHVVLRLPPEETPMTSHIREVDVSAAGSVOYREILLEGRT 180
 DB 145 LDAPVGLVARLADSESHVVLRLPPEETPMTSHIREVDVSAAGSVOYREILLEGRT 204
 QY 181 CVLSNLRGRTRTTFAVRARMAEPSTFGFWSANSEPVSLITPSDLD 225
 DB 205 CVLSNLRGRTRTTFAVRARMAEPSTFGFWSANSEPVSLITPSDLD 249

RESULT 4
 AAB13012
 ID AAB13012 standard; Protein; 503 AA.
 AC AAB13012;
 XX
 DT 08-DEC-2000 (first entry)
 DE Q-tagged erythropoietin (EPO) receptor protein.
 XX
 KW Site specific label: detection: interaction screening; transglutaminase;
 KW erythropoietin receptor; EPO.
 XX
 OS Synthetic.
 XX
 PN WO200043492-A2.
 PD 27-JUL-2000.
 XX
 PF 20-JAN-2000; 2000WO-US01481.
 PR 22-JAN-1999; 99US-0117327.
 XX
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI Tew DG, Powell DJ, Meek TD, Chen W;
 DR WPI; 2000-499222/44.
 XX
 PT Screening for a candidate compound for use in bioassays comprises
 PT contacting the candidate molecule with a labelled modified protein and
 PT detecting the label to identify interaction of the two molecules -

XX
 PS Example 4; Page 26; 49pp; English.
 XX
 CC This invention relates to methods for the site specific modification of
 CC a protein, and to a method for screening for a candidate compound which
 CC interacts with first protein. The screening method comprises contacting
 CC the candidate molecule with a labelled modified first protein and
 CC detecting the label to identify interaction of the labelled modified
 CC first protein and candidate compound. The first protein is modified to
 CC contain a peptide, represented by sequence AAB13005. The method is
 CC used to label proteins at specific sites. The present sequence
 CC represents a Q-tagged erythropoietin (EPO) receptor constructed in an
 CC example of the method of the invention.
 XX
 SQ Sequence 503 AA;

Query Match 100.0%; Score 1194; DB 21; Length 503;
 Best Local Similarity 100.0%; Pred. No. 4e-112;
 Matches 225; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 APPNLPDPKFEKSKAALLAARGPEELCTFERLEDVLCWEBAASAGVPGNYSFYQLE 60
 DB 25 APPNLPDPKFEKSKAALLAARGPEELCTFERLEDVLCWEBAASAGVPGNYSFYQLE 84
 QY 61 DEPMKLCRLHOAPRTARGAVFMCSLPTADTSSFPLELRVTASGAPRHRVHINEVVL 120
 DB 85 DEPMKLCRLHOAPRTARGAVFMCSLPTADTSSFPLELRVTASGAPRHRVHINEVVL 144
 QY 121 LDAPVGLVARLADSESHVVLRLPPEETPMTSHIREVDVSAAGSVOYREILLEGRT 180
 DB 145 LDAPVGLVARLADSESHVVLRLPPEETPMTSHIREVDVSAAGSVOYREILLEGRT 204
 QY 181 CVLSNLRGRTRTTFAVRARMAEPSTFGFWSANSEPVSLITPSDLD 225
 DB 205 CVLSNLRGRTRTTFAVRARMAEPSTFGFWSANSEPVSLITPSDLD 249

RESULT 5
 AAR06512
 ID AAR06512 standard; protein; 508 AA.
 AC AAR06512;
 XX
 DT 04-JAN-1991 (first entry)
 DE EPO receptor.
 XX
 KW Erythropoietin; Diamond Blackfan anaemia; polycythemia vera.
 XX
 OS Homo sapiens.
 XX
 PN WO9008822-A.
 PD 09-AUG-1990.
 XX
 PF 01-FEB-1990; 90WO-US00635.
 PR 03-FEB-1989; 89US-0306503.
 XX
 PA (GENE-) GENETICS INST INC.
 PA (WHIT-) WHITEHEAD INST.
 XX
 PI D'andrea A, Wong G;
 DR WPI; 1990-260931/34.
 DR N-PSDB; AAQ05748.
 XX
 PT Erythropoietin receptor and gene - used for developing reagents
 PT and systems to control and study erythropoiesis.
 PS Disclosure; Fig 2; 53pp; English.
 XX

CC The sequence was deduced from DNA obtd. from a clone isolated from
 CC a commercially available human genomic cDNA library in phage
 CC lambda fix (Stratagene). The sequence encodes a type I trans-
 CC membrane protein with binding affinity for EPO. The gene and
 CC recombinant EPO receptor produced on expression of the DNA are
 CC used to develop reagents and systems to control and study
 CC erythropoiesis. It is believed that the EPO receptor is dys-
 CC functional in individuals with Diamond Blackfan anaemia, and may
 CC be hyperactive in polycythemia vera.
 CC See also AAR06511 (murine EPO receptor).

CC Sequence 508 AA:

Query Match 100.0%; Score 1194; DB 11; Length 508;
 Best Local Similarity 100.0%; Pred. No. 4e-112;
 Matches 225; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 APPPNIPDRKFEKALLAARGPEELCTFERLEDVCFWEAASAGVGNGNSFSYQLE 60
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 25 appnlpdpkfeskkaallaargpeellctferledvctweaasagvgngnsfsygle 84
 OY 61 DEPMKICRLHOAPTARGAVFMCSLPTADTSSFVPELRVTAASGAPRYHRVHINEVVL 120
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 85 depmkicrlhgaprtargavrfwscslptadtsstfvplelrvtaasgapyrvhinevvl 144
 OY 121 LDAPVGLVARLADESGHVVLRLPPETPMTSHIRREVDVSAGNGAGSVORVEILEGRTE 180
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 145 ldapvglvaryladesghvvlrvlppetpmtshlryevdvsagngagsvqveilegrte 204
 OY 181 CVLSNLRGRRTTFAYRARMAEPSEFGFWAMSEPVSLTPSLD 225
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 205 cvlsnlrgtrlytfavrarmaepsfgfwamsepvsltlpsld 249

RESULT 6

ID AAR70032 standard; Protein; 508 AA.

AC AAR70032;

DT 07-OCT-1995 (first entry)

DE Human erythropoietin receptor.

XX Erythropoietin receptor; extracellular domain.

OS Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX New pure human erythropoietin receptor fragment - obtd. by
 PT expression as a fusion protein having a thrombin proteolytic
 PT cleavage site.
 XX
 XX
 PS Disclosure; Page 27-29; 42pp; English.

CC The full-length erythropoietin receptor (EPO-R) is given.
 CC Extracellular domains are expressed from vector plasmid pEX-2t as
 CC fusion proteins with glutathione-S-transferase. The domains are
 CC used for investigating the structure of the EPO-R and for
 CC identifying factors involved in regulating differentiation and
 CC proliferation mechanisms in erythroid progenitor cells. They can
 CC also be used for identifying and quantitating EPO and EPO-R as well
 CC as in understanding haematopoietic malignancy and some
 CC cardiovascular system disorders.

CC Sequence 508 AA:

Query Match 100.0%; Score 1194; DB 16; Length 508;
 Best Local Similarity 100.0%; Pred. No. 4e-112;
 Matches 225; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 APPPNIPDRKFEKALLAARGPEELCTFERLEDVCFWEAASAGVGNGNSFSYQLE 60
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 25 appnlpdpkfeskkaallaargpeellctferledvctweaasagvgngnsfsygle 84
 OY 61 DEPMKICRLHOAPTARGAVFMCSLPTADTSSFVPELRVTAASGAPRYHRVHINEVVL 120
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 85 depmkicrlhgaprtargavrfwscslptadtsstfvplelrvtaasgapyrvhinevvl 144
 OY 121 LDAPVGLVARLADESGHVVLRLPPETPMTSHIRREVDVSAGNGAGSVORVEILEGRTE 180
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 145 ldapvglvaryladesghvvlrvlppetpmtshlryevdvsagngagsvqveilegrte 204
 OY 181 CVLSNLRGRRTTFAYRARMAEPSEFGFWAMSEPVSLTPSLD 225
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 205 cvlsnlrgtrlytfavrarmaepsfgfwamsepvsltlpsld 249

RESULT 7

ID AAR69503 standard; Protein; 508 AA.

AC AAR69503;

DT 11-AUG-1995 (first entry)

DE Human erythropoietin receptor.

XX Erythropoietin receptor; anemia therapy; diagnostic.

OS Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

XX Homo sapiens.

Key Location/Qualifiers
 FT 1..24 /note= "signal peptide"
 FT 25..508 /note= "mature protein"
 FT Modified-site 76..79 "N-glycosylation site"
 FT 251..272 /note= "transmembrane region"
 Domain

PN US5378808-A.

XX US5378808-A.

XX US5378808-A.

XX US5378808-A.

XX US5378808-A.

XX US5378808-A.

XX US5378808-A.

03-FEB-1989; 89US-0306503.

03-FEB-1989; 89US-0306503.

03-FEB-1989; 89US-0306503.

03-FEB-1989; 89US-0306503.

03-FEB-1989; 89US-0306503.

```

PR 10-JUN-1993; 93US-0075069.
XX
XX (GENY ) GENETICS INST INC.
XX
XX D'andrea A, Jones SS, Wong GG;
XX
XX WPI: 1995-051310/07.
XX N-PSDB: AAQ81892.
XX
XX New recombinant erythropoietin receptor polypeptide(s) - used for
XX detection, purification, and therapy and for prodn. of antibodies for
XX detection and therapy
XX
XX Claim 2; Fig 9; 24pp; English.
XX
XX The sequence is that of a 55-kDa human erythropoietin receptor. The
XX receptor polypeptide may be used in purification and detection of
XX erythropoietin, and in production of antibodies for anemia therapy.
XX The polypeptide may also be used for treating individuals
XX who are hypersensitive to erythropoietin or who have elevated
XX erythropoietin levels. They may be used in therapy of e.g. primary
XX or secondary proliferative polycythemia.
XX
XX Sequence 508 AA;
SQ
Query Match 100.0%; Score 1194; DB 16; Length 508;
Best Local Similarity 100.0%; Pred. No. 4e-112;
Matches 225; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 APPNLPDPKFEESKALLAARGPEELLCFTELEDVLCFMEEAASAGVPGNYSFYOLE 60
DB 25 appnlpdpkfeeskaallaargpeellcfterledvlfveeasagvpgnysfsygle 84
QY 61 DEPMKLCRLHQAPTARGAVRFWCSLPTADTSSFVPLELRVTAASGAPRYHRVITHINEVL 120
DB 85 depmkclrlhqaaptaargavrfwcslptadtssfvpelrlvtaasgapryhrvithinevl 144
QY 121 LDAPVGLVARLADSEGHVVLWLPPEPTPMTSHIRYEVDSAGNAGSVORVEIEGRTE 180
DB 145 ldapvglvarladesghvvlwlppeptpmtshiryevdvaagngagsvqrvellegrte 204
QY 181 CVLSNLGRTRTYTFAVRARMAEPSFGFWSAMSEPVSLTPSDLD 225
DB 205 cvlsnlgrtrtytfavrarmaepsfgfwsawsepvsltpsdld 249
RESULT 8
AAR47518
ID AAR47518 standard; Protein: 508 AA.
XX
XX AAR47518;
AC
XX
XX 24-JUN-1994 (first entry)
XX
XX Human EPO receptor.
XX
XX Erythropoietin receptor; recombinant; murine; anaemia.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX Peptide 1..24
XX Protein /note= "signal peptide"
XX /note= "mature EPO receptor"
XX Region 251..272
XX /note= "putative transmembrane domain"
XX
XX US5278065-A.
XX
XX 11-JAN-1994.
XX

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PF 03-FEB-1989; 89US-0306503.
XX
XX 03-FEB-1989; 89US-0306503.
XX
XX 25-MAR-1991; 91US-0678877.
XX
XX (CHIL-) CHILDRENS MEDICAL CENT.
XX (GENY ) GENETICS INST INC.
XX (WHEH ) WHITEHEAD INST BIOMEDICAL RES.
XX
XX D'andrea A, Jones SS, Wong GG;
XX
XX WPI: 1994-025409/03.
XX N-PSDB: AAQ53995.
XX
XX Recombinant DNA encoding erythropoietin receptor - used to
XX develop prods. for study, treatment or diagnosis of disorders in
XX which receptor is dysfunctional
XX
XX Disclosure; Fig 9; 24pp; English.
XX
XX Mouse erythroleukemia (MEU) cells were used to construct a cDNA
XX library. The cDNA was used to transfect COS-1 cells and these were
XX screened for radiolodinated erythropoietin (EPO) binding to isolate
XX cDNA encoding the EPO receptor. This cDNA was used as a probe to
XX screen a human genomic cDNA library to obtain DNA encoding the human
XX EPO receptor. The cDNA may be used to study, treat or diagnose
XX disorders in which the EPO receptor is dysfunctional. The EPO
XX receptor may also be used to raise antibody or for treating
XX hypersensitivity to EPO or who have elevated levels of EPO. The prod.
XX is pref. used for treating anaemias, primary proliferative polycythemia
XX and secondary polycythemia.
XX See also AAR47517.
XX
XX Sequence 508 AA;
SQ
Query Match 99.4%; Score 1187; DB 15; Length 508;
Best Local Similarity 99.1%; Pred. No. 2e-111;
Matches 223; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
QY 1 APPNLPDPKFEESKALLAARGPEELLCFTELEDVLCFMEEAASAGVPGNYSFYOLE 60
DB 25 appnlpdpkfeeskaallaargpeellcfterledvlfveeasagvpgnysfsygle 84
QY 61 DEPMKLCRLHQAPTARGAVRFWCSLPTADTSSFVPLELRVTAASGAPRYHRVITHINEVL 120
DB 85 depmkclrlhqaaptaargavrfwcslptadtssfvpelrlvtaasgapryhrvithinevl 144
QY 121 LDAPVGLVARLADSEGHVVLWLPPEPTPMTSHIRYEVDSAGNAGSVORVEIEGRTE 180
DB 145 ldapvglvarladesghvvlwlppeptpmtshiryevdvaagngagsvqrvellegrte 204
QY 181 CVLSNLGRTRTYTFAVRARMAEPSFGFWSAMSEPVSLTPSDLD 225
DB 205 cvlsnlgrtrtytfavrarmaepsfgfwsawsepvsltpsdld 249
RESULT 9
AAY44623
ID AAY44623 standard; Protein: 438 AA.
XX
XX AAY44623;
AC
XX
XX 07-APR-2000 (first entry)
XX
XX R154C truncated human Epor(t439).
XX
XX Truncated human Epor; erythropoietin receptor; hypersensitive Epor(t439);
XX mutant human Epor; Epor signaling; cancer; infectious disease; HIV;
XX sickle cell anaemia; cytostatic; antimicrobial; antiviral;
XX immunostimulant; anti-anaemic.
XX
XX Homo sapiens.
XX

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XX Key Location/Qualifiers
FH Misc-difference 154
FT /note= "Wild type Arg. substituted by Cys"
XX
XX WO9967360-A2.
XX
XX 29-DEC-1999.
XX
XX 25-JUN-1999; 99WO-CA00606.
XX
XX 25-JUN-1998; 98CA-2241576.
XX 25-JAN-1999; 99CA-2260332.
XX
XX (HEMO-) HEMOSOL INC.
XX
XX Bell D, Matthews KE, Mueller SG;
XX
XX WPI: 2000-136979/12.
XX
XX N-PSDB; AA249636.
XX
XX Serum free defined medium useful for the efficient culture of stem
XX cells used for production of hemoglobin -
XX
XX Example 6; Fig 10; 61pp; English.
XX
XX The present sequence is R154C truncated human EPOR (erythropoietin
XX receptor). Transfection of constitutively active EPOR(R154C) by
XX electroporation into a cytokine-dependent cell line supports cell
XX population expansion in the absence of exogenous cytokines. Mutant human
XX EPOR is used in treatment of disorders related to inadequate EPOR
XX signaling. The transfected cells may also used in gene therapy to treat
XX cancer, infectious diseases (e.g. HIV), sickle cell anaemia, and
XX conditions related to abnormal expression of erythropoietin.
XX
XX Sequence 438 AA:
SQ

```

Query Match 99.3%; Score 1186; DB 21; Length 438;
Best Local Similarity 99.6%; Pred. No. 2.1e-111;
Matches 224; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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OY 1 APPPNLPDRKFEKALLAARCPBELLCFTEERLEDVLCFWEBAASAGVPGNYSFSYQLE 60
DB 25 apppnlpdkfkfkaallaaarspeellcfterledvlfweeaaagvpgnysfsygle 84
OY 61 DEPWKICRIHQAPRTARGAVRFWCSLPADTSSFPVLELRVTASGAPRYHRVHINEVVL 120
DB 85 depwkicrlhgaprtargavrfwscslpadtssfpvlelrvtasagapryhrvihnervl 144
OY 121 LDAPVGLVARLADSGHVVLRLMPPETPMTSHIRYEVDSAGNGAGSVORVEILEGRTE 180
DB 145 ldapvglvarladsghvvlrlmppetpmtshiryevdvsagngagsvqrvellegrite 204
OY 181 CVLSNLRGRTYTFNVRARAEPSFGGFSANSEPVSLTSPSLD 225
DB 205 cvlsnlrgtrytfavrarmaepsfggfwswsepsvsltlpsld 249

```

RESULT 10
AAB21686
ID AAB21686 standard; peptide; 211 AA.
XX
XX AAB21686;
XX
XX 21-DEC-2000 (first entry)
XX
XX Human mature erythropoietin receptor EPOR extracellular domain #2.
XX
XX Ligand: cell surface receptor; erythropoietin; EPOR; human;
XX protein design automation; PDA.
XX
XX Homo sapiens.
XX

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XX
XX WO200047612-A2.
XX
XX 17-AUG-2000.
XX
XX 11-FEB-2000; 2000WO-US03665..
XX
XX 11-FEB-1999; 99US-0120009.
XX 29-APR-1999; 99US-0131674.
XX
XX (XENC-) XENCOR INC.
XX
XX Luo P, Dahiya B;
XX
XX WPI: 2000-549135/50.
XX
XX Screening for ligand analogs and agents which modulate ligand-receptor
XX binding; comprises adding a test ligand to a non-naturally occurring
XX cell surface receptor analog -
XX
XX Example 1; Fig 8; 82pp; English.
XX
XX The present invention relates to a method for screening for a ligand
XX analog, comprising adding a candidate ligand to a non-naturally occurring
XX cell surface receptor analog e.g. erythropoietin receptor (EPOR), and
XX determining the binding of the ligand to the analog. The present sequence
XX is a mature human erythropoietin receptor (EPOR) extracellular domain.
XX Protein Design Automation was carried out on the present sequence, so
XX that it may be used in the present invention as a cell surface receptor
XX analog.
XX
XX Sequence 211 AA:
SQ

```

Query Match 93.1%; Score 1112; DB 21; Length 211;
Best Local Similarity 100.0%; Pred. No. 2.5e-104;
Matches 211; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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OY 10 KFESKALLAARCPBELLCFTEERLEDVLCFWEBAASAGVPGNYSFSYQLEDEPWKICRI 69
DB 1 kfeskaallaaargpeellcfterledvlfweeaaagvpgnysfsyqledepwkicrl 60
OY 70 HQAPRTARGAVRFWCSLPADTSSFPVLELRVTASGAPRYHRVHINEVVLDAPIGVLA 129
DB 61 hgaprtargavrfwscslpadtssfpvlelrvtasagapryhrvihnervlldapgvla 120
OY 130 RLADSGHVVLRLMPPETPMTSHIRYEVDSAGNGAGSVORVEILEGRTECVLSMLRGR 189
DB 121 rladesghvvlrlmppetpmtshiryevdvsagngagsvqrvellegritecvlsnlgr 180
OY 190 TRYTFNVRARMAEPSFGGFSANSEPVSLT 220
DB 181 trytfavrarmaepsfggfwswsepsvslt 211

```

RESULT 11
AAR06511
ID AAR06511 standard; protein; 507 AA.
XX
XX AAR06511;
XX
XX 04-JAN-1991 (first entry)
XX
XX EPO receptor sequence deduced from DNA of clone 190.
XX
XX Erythropoietin; Diamond Blackfan anaemia; polycythemia vera.
XX
XX Mus musculus.
XX
XX Key Location/Qualifiers
XX Peptide 1..24
XX /label=signal peptide
XX
XX Domain 25..248
XX

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FT FT /label-extracellular domain
FT FT /note-EPO binding region
FT FT 248..271
FT FT Domain
FT FT /label-transmembrane domain
FT FT 272..507
FT FT /label-intracellular domain
FT FT 75..77
FT FT Modified-site
FT FT /label-N-linked-glycos
FT FT 182..184
FT FT Modified-site
FT FT /label-N-linked-glycos

XX PN W09008822-A.
XX PD 09-AUG-1990.
XX PF 01-FEB-1990; 90MO-US00635.
XX PR 03-FEB-1989; 89US-0306503.
XX PA (GENE-) GENETICS INST INC.
XX PA (WHT-) WHITEHEAD INST.
XX PL D'andrea A, Wong G;
XX XX WPI; 1990-260931/34.
XX DR N-PSDB; AA005747.
XX XX
XX PT Erythropoietin receptor and gene - used for developing reagents
XX PT and systems to control and study erythropoiesis.
XX PS Disclosure; Fig 1; 53pp; English.
XX CC The sequence was deduced from DNA from a clone isolated from a
XX CC cDNA library prepd. from uninduced murine erythroleukemia cells.
XX CC It is a type I transmembrane protein with binding affinity for EPO.
XX CC The gene and recombinant EPO receptor produced on expression of
XX CC the DNA are used to develop reagents and systems to control and
XX CC study erythropoiesis. It is believed that the EPO receptor is
XX CC dysfunctional in individuals with Diamond Blackfan anaemia, and
XX CC may be hyperactive in polycythemia vera.
XX CC See also AAR06512 (human EPO receptor).
XX XX
XX SQ Sequence 507 AA;

Query Match 82.3%; Score 982.5; DB 11; Length 507;
Best Local Similarity 83.1%; Pred. No. 9.7e-91;
Matches 187; Conservative 13; Mismatches 24; Indels 5; Gaps 1;

QY 1 APPNLPPPKFESKALLAARGPPELLCFTELEDLVCFWEERASAGVPGNYSTYOLE 60
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 25 apspslpppkfeskallarsgseellcftqlledlvcfweeaaasgm-dfnystsytle 83
QY 61 DEPMKLCRLHQAPTARGAVRFMCSLPTADTSSFVLELRVTAAAGAPRYHRYHINEVVL 120
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 84 gesrkscslhgaplvrgsvrfwscslptadtsfvpelqvtcaasgspyrhrihinevvl 143
QY 121 IDAPVGLVARKLADSGHVAHRLPPPEPMTSHIREVDVSAAGNAGSVQRYEILEGRTE 180
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 144 idapagllarraaegshvrlwlpptgagpmthlryevdvasagnaggtqrevlegrte 203
QY 181 CVLSNLGRTRTYTFVARRAMAEPSPGFWMSAWSEPVSLTPSDLD 225
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 204 cvlenlrgtrtytfvairmaeprtsfgfwswsepasilltasdld 248

RESULT 12
AAR47517
ID AAR47517 standard; Protein: 507 AA.
XX AAR47517;
AC
XX
DT 24-JUN-1994 (first entry)

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XX XX MEL EPO receptor.
XX DE
XX XX Erythropoietin receptor; recombinant; murine; anaemia.
XX KM
XX XX Mus musculus.
XX OS
XX FH
XX FT Key
XX FT Peptide
XX FT 1..24
XX FT /note= "signal"
XX FT 25..507
XX FT Protein
XX FT /note= "mature EPO receptor"
XX FT 75
XX FT Modified-site
XX FT /note= "potential N-glycosylation site"
XX FT 383
XX FT Modified-site
XX FT /note= "potential N-glycosylation site"
XX FT 250..271
XX FT Region
XX FT /note= "putative transmembrane region"

XX PN US5278065-A.
XX PD 11-JAN-1994.
XX PF 03-FEB-1989; 89US-0306503.
XX PR 03-FEB-1989; 89US-0306503.
XX PR 25-MAR-1991; 91US-0678877.
XX XX
XX PA (CHIL-) CHILDRENS MEDICAL CENT.
XX PA (GENY) GENETICS INST INC.
XX PA (WHD) WHITEHEAD INST BIOMEDICAL RES.
XX XX
XX PI D'andrea A, Jones SS, Wong GG;
XX XX WPI; 1994-025409/03.
XX DR N-PSDB; AA053994.
XX XX
XX PT Recombinant DNA encoding erythropoietin receptor - used to
XX PT develop prods. for study, treatment or diagnosis of disorders in
XX PT which receptor is dysfunctional
XX PS Disclosure; Fig 2; 24pp; English.
XX CC Mouse erythroleukemia (MEL) cells were used to construct a cDNA
XX CC library. The cDNA was used to transfect COS-1 cells and these were
XX CC screened for radiolabeled erythropoietin (EPO) binding to isolate
XX CC cDNA encoding the EPO receptor. The cDNA may be used to isolate the
XX CC EPO receptor from other sources and to study, treat or diagnose
XX CC disorders in which the EPO receptor is dysfunctional. The EPO
XX CC receptor may also be used to raise antioded or for treating
XX CC hypersensitivity to EPO or who have elevated levels of EPO. The prod.
XX CC is pref. used for treating anaemias, primary proliferative polycythemia
XX CC and secondary polycythemia.
XX CC See also AAR47518.
XX XX
XX SQ Sequence 507 AA;

Query Match 82.3%; Score 982.5; DB 15; Length 507;
Best Local Similarity 83.1%; Pred. No. 9.7e-91;
Matches 187; Conservative 13; Mismatches 24; Indels 1; Gaps 1;

QY 1 APPNLPPPKFESKALLAARGPPELLCFTELEDLVCFWEERASAGVPGNYSTYOLE 60
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 25 apspslpppkfeskallarsgseellcftqlledlvcfweeaaasgm-dfnystsytle 83
QY 61 DEPMKLCRLHQAPTARGAVRFMCSLPTADTSSFVLELRVTAAAGAPRYHRYHINEVVL 120
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 84 gesrkscslhgaplvrgsvrfwscslptadtsfvpelqvtcaasgspyrhrihinevvl 143
QY 121 IDAPVGLVARKLADSGHVAHRLPPPEPMTSHIREVDVSAAGNAGSVQRYEILEGRTE 180
DB |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 144 idapagllarraaegshvrlwlpptgagpmthlryevdvasagnaggtqrevlegrte 203

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Oy	181	CVLSTLRCGRTRTFPAVRARMAEPSPSGGWSAASEVSLTLTDL	225
Dd	204	CVLSNLRGRTYTFVAVRAAEPSISGTSWSEPSALLASD	248
RESULT 13			
ID	AA69502	AA69502	
XX	AA69502	standard; Protein: 507 AA.	
XX	AA69502;		
XX	10-AUG-1995	(first entry)	
XX	Mouse erythropoietin receptor.		
XX	Erythropoietin receptor; anemia therapy; signal peptide;		
KM	transmembrane region; N-linked glycosylation.		
XX	Mus musculus.		
XX	Key	location/qualifiers	
FT	Peptide	1..24	
FT	/note= "signal peptide"	25..507	
FT	Protein	/note= "mature protein"	
FT	Modified-site	75..77	
FT	/note= "N-linked glycosylation site"	250..271	
FT	Domain	/note= "transmembrane region"	
FT	Modified-site	383..385	
FT	/note= "N-linked glycosylation site"		
XX	US5378808-A.		
XX	03-JAN-1995.		
XX	03-FEB-1989;	89US-0306503.	
XX	03-FEB-1989;	89US-0306503.	
PR	25-FEB-1989;	89US-0306503.	
PR	25-MAR-1991;	91US-0678877.	
PR	10-JUN-1993;	93US-0075069.	
XX	(GENY) GENETICS INST INC.		
PA	D'andrea A, Jones SS, Wong GG;		
PI	WI: 1995-051310/07.		
XX	N-PSDB: AAQ81891.		
DR	New recombinant erythropoietin receptor polypeptide(s) - used for		
XX	detection, purification, and therapy and for prodn. of antibodies for		
PT	detection and therapy		
XX	Claim 1; Fig 2; 24pp; English.		
XX	The sequence corresponds to a mouse erythropoietin receptor,		
CC	including putative signal peptide and transmembrane regions, and 2		
CC	N-linked glycosylation sites. The protein is derived from mouse		
CC	erythroleukemia cells and may be used in drug design or in		
CC	pharmaceutical compositions for therapy of anemia.		
XX	Sequence 507 AA;		
Oy	Query Match	82.3%; Score 982.5; DB 16; Length 507;	
	Best Local Similarity	83.1%; Pred. No. 9.7e-91;	
Matches	187; Conservative 13; Mismatches 24; Indels 1; Gaps		
Oy	1 APPNLPKPKESKALLAAGPEELLCTFERLEDVCFWEBSAGVGPVSYOLE 60		
	:		
Dd	25 APPSLPDPKFSKALLASISRGSEELCTFGRLEDVCFWEAASGM-dfnyfsyql 83		

OY		61	DEPMKLCRLHQAPTARGAVRFWCSPLTADTSEFVPLELRVTAAAGAPRYHRVIHINEVYL	120
Dd		84	gesrscslldqaprvygsvrfwcslptadctsfvplelqvteasgsprryhinevyl	143
OY		121	IDAPVGLVARLADDESGHVLRMLPPPETPMTSHIRYEVDVASGNGASQVRVEILEGRTE	180
Dd		144	ldapvgllarrtaegshvrlwlpdpagpmthiryevdvasgnragtgrrevlegite	203
OY		161	CVLNLMRGRTFRYTFAVRARMAEPFSFGGEWSANSEPVSLLTPSDLD	225
Dd		204	cvlslnlrgtrytfavrarmaeafsfgfswasepasllaadld	248
 RESULT_14				
XX	AAR50327	ID	AAR50327 standard; Protein; 507 AA.	
XX		AC	AAR50327;	
DX		DT	19-OCT-1994 (first entry)	
XX		DE	Mouse soluble EPO receptor protein.	
XX		OS	Murine; soluble; erythropoietin; EPO; receptor protein; sEPO-R; drug; antigen; diagnostic agent; biochemical reagent.	
XX		FH	Mus musculus.	
FT		Key Modified-site	Location/Qualifiers 75..77 /note= "N-linked glycosylation site"	
XX		JN	JP06038787-A.	
PD		PN	15-FEB-1994.	
PE		PR	04-MAR-1992; 92JP-0082865.	
XX		PA	04-MAR-1992; 92JP-0082865.	
DR		PS	(SNOW) SNOW BRAND MILK PROD CO LTD. WPI; 1994-094847/12. N-PSDB; AAO44854.	
PT		SQ	Soluble erythropoietin receptor protein - and DNA coding for sEPO-R, useful as diagnostic reagent	
XX			Disclosure: Fig 1; 9pp; Japanese.	
CC			This sequence represents the murine soluble erythropoietin (EPO) receptor protein (sEPO-R). This protein is able to bind to EPO and has antigenicity as an EPO receptor. The molecular weight of the full length protein is pref 33 or 29 kD. The protein is useful as a drug, as a diagnostic agent and a biochemical reagent.	
Query Match	Best Local Similarity	81.7%;	Score 975.5;	DB 15; Length 507;
Matches 186;	Conservative 13;	Mismatches 25;	Indels 1;	Gaps 1;
1 APPMLDPKFEESKAALLAARGPEELCTFERLEDLVCFWEBAASAGVPGNYSFYSQLE	60			
25 apspdlpdkfskalkallastryseelictftgriedlvctweaaasm-dfnysfsyql	83			
61 DEPMKLCRLHQAPTARGAVRFWCSPLTADTSEFVPLELRVTAAAGAPRYHRVIHINEVYL	120			
84 gesrscslldqaprvygsvrfwcslptadctsfvplelqvteasgsprryhinevyl	143			
121 IDAPVGLVARLADDESGHVLRMLPPPETPMTSHIRYEVDVASGNGASQVRVEILEGRTE	180			
144 ldapvgllarrtaegshvrlwlpdpagpmthiryevdvasgnragtgrrevlegite	203			
161 CVLNLMRGRTFRYTFAVRARMAEPFSFGGEWSANSEPVSLLTPSDLD	225			
204 cvlslnlrgtrytfavrarmaeafsfgfswasepasllaadld	248			
121 LDAPVGLVARLADDESGHVLRMLPPPETPMTSHIRYEVDVASGNGASQVRVEILEGRTE	180			

Db 144 ldpaglllarreeegshvrlwlpdpapmtlhiryevdsagnragtqrvelegpte 203
QY 181 CVLSNLRGRTRTPAVRARAEPSGEGFSANSEPSILTPSDLD 225
Db 204 cvlsnlrgqlrtylfavrarmaepsfsgfwsawsepaslltas 248

RESULT 15

AAR50326
ID AAR50326 standard; Protein; 265 AA.
XX
AC AAR50326;
XX
DT 19-OCT-1994 (first entry)
XX
DE Mouse soluble EPO receptor protein fragment.
XX
KW Murine; soluble; erythropoietin; EPO; receptor protein; SEPO-R; drug;
XX antigen; diagnostic agent; biochemical reagent.
XX
OS Mus musculus.
XX

Key Location/Qualifiers
FT Peptide 1..25
FT /note= "Signal peptide"
FT Protein 26..265
FT /note= "Mature EPO-R fragment"
XX

PN JP06038787-A.
XX

PD 15-FEB-1994.
XX

PF 04-MAR-1992; 92JP-0082865.
XX

PR 04-MAR-1992; 92JP-0082865.
XX

PA (SNOW) SNOW BRAND MILK PROD CO LTD.
XX

DR WPI: 1994-094847/12.
XX

DR N-PSDB: AAQ44853.
XX

PT Soluble erythropoietin receptor protein - and DNA coding for
SEPO-R, useful as diagnostic reagent
XX

PS Disclosure: Page 5-6; 9pp; Japanese.
XX

CC This sequence represents a fragment of the murine soluble erythro-
poietin (EPO) receptor protein (SEPO-R). This protein is able to
bind to EPO and has antigenicity as an EPO receptor. The molecular
weight of the full length protein is pref 33 or 29 kD. The protein
is useful as a drug, as a diagnostic agent and a biochemical reagent.
XX

SQ Sequence 265 AA:
XX

Query Match 80.9%; Score 966.5; DB 15; Length 265;
Best Local Similarity 82.9%; Pred. No. 1.8e-89;
Matches 184; Conservative 13; Mismatches 24; Indels 1; Gaps 1;

QY 1 APPPLPDKPEESKALLAARPEELCFERLEDLVCFWEBAASAGVPGNVSFSYOLE 60
Db 25 apspjdpdkfeskkaallasrgseelctqrlcdlvctweaasgm-dfnysfsgyle 83
QY 61 DEPWLCRLHOAPRTAGARFMCSLPTADTSSFVPLELAVTAAAGAPRRYRHINEVVL 120
Db 84 gestkscsjhgqplvrgsvtscslptadtsfvpelqvtasgspryhrlhinevvl 143
QY 121 LDAPVGLVARLADSESGHVVLRMLPPETPMTSHIRYEVDSAGNGAGSVORVEILEGRTE 180
Db 144 ldpaglllarreeegshvrlwlpdpapmtlhiryevdsagnragtqrvelegpte 203
QY 181 CVLSNLRGRTRTPAVRARAEPSGEGFSANSEPSILTPS 222

Db 204 cvlsnlrgqlrtylfavrarmaepsfsgfwsawsepaslltas 245

Search completed: August 28, 2002, 17:31:06
Job time: 1453 sec

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